

REMARKS

Claims 1, 3-10, 14-16, 20, and 21 are pending and stand rejected. Claims 14-15 have been canceled without prejudice to continued prosecution. Claims 1 and 16 have been amended and new claims 24-28 have been added. Claims 1 and 16 have been amended to recite at least 70% sequence identity and to recite that the nucleic acid is capable of promoting expression of a heterologous nucleic acid molecule in a transformed plant cell. Claim 16 also has been amended to recite that the nucleic acid has at least 70% sequence identity to a fragment of the nucleotide sequence of SEQ ID NO:1, wherein the fragment is at least 500 nucleotides in length. Support for the amendments to claims 1 and 16 can be found, for example, at page 4, lines 13-20, page 5, lines 20-30, and page 8, lines 1-7 of the specification. New claims 24 and 25 recite that the fragment is at least 1000 or at least 2000 nucleotides in length. New claims 26-28 are directed to fragments of SEQ ID NO: 1 that are capable of promoting expression in plants. Support for claims 24-28 can be found, for example, at page 5, lines 20-30 of the specification. No new matter has been added. Applicants respectfully request reconsideration and allowance of claims 1, 3-10, 16, 20, 21, and 24-28 in view of the above amendments and following remarks.

Objection to the Specification

The Examiner objected to the specification because Table 4 was cut off on the right side. Applicants have replaced Table 4 with a new Table 4 in which the right column can be viewed in its entirety. Support for Table 4 can be found in Example 4 of the specification. No new matter has been added. The Examiner is requested to withdraw the objection to the specification.

Objection to the Claims

The Examiner objected to claims 14-16 for being of improper dependent form for failing to limit the subject matter of the previous claims. The Examiner asserted that claims 14-16 encompass nucleic acid sequences that can not have at least 30% sequence identity to the entirety of SEQ ID NO:1.

Claims 14 and 15 have been canceled without prejudice to continued prosecution. Claim 16 has been amended to remove the dependency on claim 1. Claim 16 also has been amended to recite that the nucleic acid has at least 70% identity to a fragment of the nucleotide sequence set forth in SEQ ID NO:1, wherein the fragment is at least 500 nucleotides in length. The Examiner is requested to withdraw the objection to claims 14-16.

Rejection under 35 U.S.C. §112, first paragraph

The Examiner rejected claims 1, 3-9, 14-16, 20, and 21 under 35 U.S.C. §112, first paragraph, for lack of enablement. The Examiner asserted that:

The claims do not limit the function of the encompassed nucleic acids, and therefore the claimed nucleic acids may have any function. However, while the specification teaches that SEQ ID NO:1 has promoter activity, it does not teach any other function for the nucleic acids encompassed by the claims. It is unclear how one skilled in the art is to use the claimed nucleic acids, other than SEQ ID NO:1, as other functions are taught by the specification. In the absence of further guidance, undue experimentation would be required by one skilled in the art to determine the functions of isolated nucleic acids that differ from SEQ ID NO:1. As the functions of the claimed nucleic acids are not taught, one skilled in the art would also not know how to use the claimed transgenic plant cells and plants, other than those transformed with a nucleic acid construct comprising SEQ ID NO:1.

Applicants respectfully traverse.

Amended claim 1 indicates that the nucleic acid is capable of promoting expression of an operably linked heterologous nucleic acid in a plant cell. Thus, claims 1, 3-9, 14-16, 20, and 21 limit the function of the nucleic acid. One of ordinary skill in the art can determine if a nucleic acid has at least 70% identity to SEQ ID NO:1 and determine if the nucleic acid functions as a regulatory element without undue experimentation. For example, the specification indicates that BLAST2 sequences program can be used for calculating percent sequence identity. See, specification, at page 6, line 1 through page 7, line 23. The specification provides detailed guidance regarding the location of regulatory motifs in SEQ ID NO: 1 that are involved in promoting expression. See, specification at page 8, line 8 through page 9, line 5, page 20, line 1 through page 22, line 24, and Table 1. This information, along with the detailed guidance

provided in the specification at page 9, line 20 to page 10, line 11, regarding routine assays to confirm functional activity in a plant cell, is more than sufficient to enable one of ordinary skill in the art can make and use the claimed nucleic acids, expression vectors, plant cells, and plants without undue experimentation. Applicants respectfully request that the rejection under 35 U.S.C. §112, first paragraph, be withdrawn.

CONCLUSION

Applicants submit that claims 1, 3-10, 16, 20, 21, and 24-28 are in condition for allowance, which action is respectfully requested. Please apply the three-month Petition for Extension of Time fee and any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: November 3, 2008

/Monica McCormick Graham/
Monica McCormick Graham, Ph.D.
Reg. No. 42,600

Fish & Richardson P.C.
60 South Sixth Street
Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (877) 769-7945